AMENDMENT OF SOLICITATI	ON OF CON	TRACT	1. Contract ID Code Firm-Fixed-Price		Page 1 Of 8				
2. Amendment/Modification No.	3. Effective Date	4. Requisition/P	urchase Req 1		5. Project No.	(If applicable)			
P00001	2001APR16	SEE S	SCHEDULE						
6. Issued By	Code W56HZV	7. Administered	By (If other t	han Item 6)		Code S3605A			
TACOM		DCM DAYT	ON			<u></u>			
AMSTA-CM-CLGB			UILDING 30						
AL TRACIAK (810)574-7869 WARREN, MICHIGAN 48397-5000			PATTON AVEN	UE , OH 45433-5	302				
HTTP://CONTRACTING.TACOM.ARMY.MIL		WICIOIII III	IIBROON III D	, 011 13133 3	302				
EMAIL: TRACIAKA@TACOM.ARMY.MIL			SCD C	PAS NONE	A DD I	PT SC1012			
8. Name And Address Of Contractor (No., Stre	et. City. County. State and	   Zin Code)			nt Of Solicitation				
of runne rina radicess of contractor (100, pare	et, etty, county, state une	Zip Couc)		>111 11111cmanie		1110			
DYNASIM RESEARCH LTD									
1776 MENTOR AVENUE				9B. Dated (See	Item 11)				
CINCINNATI, OH 45212-3597			- T	10A Modificat	ion Of Contract	/Order No			
			X	1021. Modifica	ion or contract	Graci 110.			
TYPE BUSINESS: Other Small Business	Dorforming in H.C.			DAAE07-00-C-	L026				
	refroming in 0.5.			10B. Dated (See Item 13)					
Code 1L8R4 Facility Code				1999DEC23					
11. T	HIS ITEM ONLY APPLI	ES TO AMENDM	ENTS OF SC	DLICITATION	S				
The above numbered solicitation is amend	led as set forth in item 14.	The hour and dat	e specified fo	r receipt of Of	fers				
is extended, is not extended.									
Offers must acknowledge receipt of this ame (a) By completing items 8 and 15, and return						he following methods: dment on each copy of the			
offer submitted; or (c) By separate letter or									
ACKNOWLEDGMENT TO BE RECEIVED									
SPECIFIED MAY RESULT IN REJECTIO									
change may be made by telegram or letter, p opening hour and date specified.	orovided each telegram or	ietter makes reier	ence to the so	ncitation and t	ms amendment,	and is received prior to the			
12. Accounting And Appropriation Data (If rec ACRN: AB NET INCREASE: \$49,691.00	quired)								
ACRN: AB NET INCREASE: \$49,691.00									
13. THIS	ITEM ONLY APPLIES T	O MODIFICATION	ONS OF CON	TRACTS/ORI	DERS				
KIND MOD CODE: G	It Modifies The Contra	act/Order No. As I	Described In I	tem 14.					
A. This Change Order is Issued Pursual The Contract/Order No. In Item 10a				The Ch	anges Set Forth	In Item 14 Are Made In			
B. The Above Numbered Contract/Orde Set Forth In Item 14, Pursuant To T			e Changes (su	ch as changes i	n paying office,	appropriation data, etc.)			
X C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of: Mutual Agreement of the Parties									
D. Other (Specify type of modification a	nd authority)								
E. IMPORTANT: Contractor is not,	X is required to sign	this document an	d return		opies to the Issu	ning Office.			
14. Description Of Amendment/Modification (	<u> </u>				•				
SEE SECOND PAGE FOR DESCRIPTION									
Contract Expiration Date: 2001AUG10									
Except as provided herein, all terms and condi-	tions of the document refer	renced in item 9A	or 10A, as he	retofore chang	ed, remains uncl	nanged and in full force			
and effect.		16A Nam	A J T:41 . C	Nf C4	Off: (T				
15A. Name And Title Of Signer (Type or print)	,	WYMAN E	. YOUNG II	MIL (810)574	Officer (Type or -8093	. p.m.,			
15B. Contractor/Offeror	15C. Date Signed		ed States Of A			16C. Date Signed			
(Signature of narrow and naind to the	_	Ву	(Ciarata	/SIGNED/	Affican)				
(Signature of person authorized to sign) NSN 7540-01-152-8070		30-105-02	(Signature 01			ORM 30 (REV. 10-83)			

## Reference No. of Document Being Continued

PIIN/SIIN DAAE07-00-C-L026

MOD/AMD P00001

Page 2 of 8

Name of Offeror or Contractor: DYNASIM RESEARCH LTD

SECTION A - SUPPLEMENTAL INFORMATION

Program: Cynlinder Torque Estimation in Heavy Duty Diesel Engines

Purpose: Exercise of Phase I Option

Previous Contract Amount: \$ 69,631

Amount this Action: \$ 49,691

Total Contract Amount: \$119,322

- 1. This Modification P00001 is a Supplemental Agreement to contract DAAE07-00-C-L026 to exercise the Phase I Option for CLIN 0002, at the amount shown in section B.
- 2. By execution of this bilateral modification, the following changes are incorporated into the contract:
  - a. Sub-CLINs 0002AA and 0002AB are established under Option CLIN 0002.
  - b. Provision B.2 is added to address payments under the Phase I Option.
  - c. Provision C.1.2 of the Scope of Work is revised to identify the specific tasks of the Phase I Option.
  - d. Provision F.1.1 of "Delivery of Data" is revised to reflect updated e-mail addresses.
- e. Provision F.4 "Option-Performance" is revised to reflect the 4-month period of option performance, as established by this modification.
  - f. Accounting and appropriation data for the funds obligated by this modification are added to Section G.
- 2. As a result of this Modification, the Total Contract Amount is increased by \$49,691, from \$69,631 to \$119,322.
- 3. Except as provided for in this Modification all terms and conditions of Contract DAAE07-00-C-L026, as previously modified, remain unchanged and in full force and effect.

\*\*\* END OF NARRATIVE A 001 \*\*\*

# Reference No. of Document Being Continued PIIN/SIIN DAAE07-00-C-L026

MOD/AMD P00001

Page 3 of 8

Name of Offeror or Contractor: DYNASIM RESEARCH LTD

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS				
0002	Supplies or Services and Prices/Costs				
	SERVICES LINE ITEM				
	SECURITY CLASS: Unclassified				
	Contractor shall furnish all the supplies and services to accomplish the tasks specified in Section C, Scope of Work paragraph C.1.2 "PHASE I OPTION". The total amount for the Option effort shall be \$49,691.00.				
	(End of narrative B001)				
0002AA	SERVICES LINE ITEM				\$24,845.00
	NOUN: PHASE I OPTION SECURITY CLASS: Unclassified PRON: E112C162EH PRON AMD: 01 ACRN: AB AMS CD: 665502M4055DD				
	Supplies/Services described in Contractor's Progress Report, Data Item A001 (see Paragraph B.2), submitted following 2nd month of Phase I Option effort, along with a DD Form 250.				
	(End of narrative B001)				
	Inspection and Acceptance INSPECTION: Destination ACCEPTANCE: Destination				
	Deliveries or Performance  DLVR SCH PERF COMPL  REL CD QUANTITY DATE  001 0 SEE SECTION F				
	\$ 24,845.00				

# Reference No. of Document Being Continued PIIN/SIIN DAAE07-00-C-L026

MOD/AMD P00001

Page 4 of 8

Name of Offeror or Contractor: DYNASIM RESEARCH LTD

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AB	SERVICES LINE ITEM				\$ 24,846.00
	NOUN: PHASE I OPTION SECURITY CLASS: Unclassified PRON: E112C162EH PRON AMD: 01 ACRN: AB AMS CD: 665502M4055DD				
	Supplies/Services described in the Final Report (Data Item A002) (see Paragraph B.2), submitted at the end of Phase I Option effort, along with a DD Form 250.				
	(End of narrative B001)				
	Inspection and Acceptance INSPECTION: Destination ACCEPTANCE: Destination				
	Deliveries or Performance           DLVR SCH         PERF COMPL          REL_CD        QUANTITY        DATE				
	\$ 24,846.00				

# Reference No. of Document Being Continued

PIIN/SIIN DAAE07-00-C-L026

MOD/AMD P00001

Page 5 of 8

Name of Offeror or Contractor: DYNASIM RESEARCH LTD

The payments under this contract are to be in accordance with the sub-CLINs. The sub-CLINs (0001AB, and 0001AC)are set up to pay the Contractor at the 2nd, 4th, and 6th month after contract award. The payment is contengent upon TACOM's receiving and approving a DD Form 250 for the designated report in each sub-CLIN. The approved DD Form 250 2ill be sent to the payment office, so the Contractor can be paid.

- B.2\* Payments under the Phase I Option are to be in accordance with sub-CLINs 0002AA and 0002AB, which are set up to pay the Contractor at the 2nd and 4th month after option exercise. Payments are contingent upon TACOM's receipt and approval of the DD Form 250 for the designated report in each sub-CLIN. Approved DD Form 250s will be sent to the payment office, so the Contractor can be paid.
- \* Added by Modification P00001.

\*\*\* END OF NARRATIVE B 001 \*\*\*

## Reference No. of Document Being Continued

PIIN/SIIN DAAE07-00-C-L026

MOD/AMD P00001

Page 6 of 8

Name of Offeror or Contractor: DYNASIM RESEARCH LTD

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

#### C.1 SCOPE OF WORK

- C.1.1 PHASE I: The contractor, acting as an independent contractor and not as an agent of the Government, shall provide the necessary personnel, facilities, materials and services to perform the effort described in contractor's proposal dated August 9, 1999. Small Business Innovation Research Program (SBIR), Topic Number A99-086, Proposal Title: Cylinder Torque Estimation in Heavy Duty Diesel Engines, paragraphs d.2 (pages 8-10), e.1, and e.2 (pages 11-14).
- C.1.2\* PHASE I OPTION: The contractor, acting as an independent contractor and not as an agent of the Government, shall provide the necessary personnel, facilities, materials and services to complete the effort described below.
- C.1.2.1\* Improve the digital torsional measurement system. The contractor will reformulate the algorithms to accommodate both steady state and transient conditions. The Graphical User Interface (GUI) will be reformulated to acquire and process transient data through an intuitive interface. The contractor will convert the digital measurement GUI from MATLAB 5.3 to a MATLAB 6 format. As part of this effort, the contractor will also propose ways to improve the reliability and performance of the front end signal conditioning.
- C.1.2.2\* Select an engine for the diagnostics work.
- C.1.2.3\* Select a test cell for the diagnostics work (the test cell shall be compatible with the engine selected).
- C.1.2.4\* Determine engine instrumentation requirements. The contractor will determine which combination of engine and cylinder pressure transducer will work best. The contractor will also determine whether to purchase or make instrumentation to measure signals such as cylinder pressure and linear vibration.
- \* Revised/added by Modification P00001.

#### C.2 DELIVERABLES

- C.2.1 The contractor shall submit progress reports on all work completed to date, on a bi-monthly basis for a total of two (2) progress reports in Phase I in accordance with DD Form 1423 (A001). The contractor shall submit one progress report on all work completed to date, at the end of the second month of the Phase I Option, if exercised, in accordance with DD Form 1423 (A001)
- C.2.2 The contractor shall prepare and submit to the Government one (1) Final Report at the end of Phase I and one (1) Final Report at the end of the Phase I Option (if exercised), each addressing all of the technical information in C.1 and in accordance with DD Form 1423 (A002).
- C.2.3 The contractor shall ship to the COTR at the address specified in F.1.2, all equipment purchased for use in this contract, at the end of Phase I, or at the end of the Option period (if exercised).

### C.3 MEETINGS

- C.3.1 The contractor shall initiate and coordinate a kick-off meeting by telephone with the COTR. The meeting shall be held no later than one (1) month after contract award.
- C.3.2 The contractor shall plan and conduct Initial and Final Review meetings at TACOM within the period of performance for the Phase I Option, if exercised.

## Reference No. of Document Being Continued

PIIN/SIIN DAAE07-00-C-L026

MOD/AMD P00001

Page 7 of 8

Name of Offeror or Contractor: DYNASIM RESEARCH LTD

SECTION F - DELIVERIES OR PERFORMANCE

#### DELIVERIES OR PERFORMANCE

#### F.1 Delivery of Data

F.1.1\* The contractor is encouraged to submit all reports electronically to the extent practible in accordance with the Contract Data Requirements List (CDRL) (DD Form 1423), to the following e-mail addresses:

makarp@tacom.army.mil
sinclair@tacom.army.mil

- \* Changed by Modification P00001.
- F.1.2 All data deliverable under this contract that cannot be submitted electronically, shall be delivered in accordance with the Contract Data Requirements List (CDRL) DD Form 1423, and shall be delivered FOB Destination to the following address:

U.S. Tank-Automotive and Armaments Command ATTN: AMSTA-TR-N/MS 02, Mr. Paul Makar Warren, Michigan 48397-5000

- F.2 Delivery of Equipment
- F.2.1 The contractor shall ship all equipment purchased for use in this contract, FOB Destination to the address in F.1.2. The equipment shall be shipped at the end of Phase I, or at the end of the Phase I Option (if exercised).

## F.3 <u>Performance</u>

- F.3.1 The period of performance of the Contract shall be six (6) months from date of award, including submission of final technical report and final briefing.
- F.3.2 The Contractor shall submit the Draft Technical Report five (5) months and one (1) week after contract award. The Government will review the draft technical report and return it to the Contractor within seven (7) days of receipt. The Contractor shall submit the Final Technical Report within fourteen (14) days after receipt of draft comments/approval. Acceptance of final report will constitute completion.
- F.4 Option-Performance
- F.4.1\* If the option is exercised by modification to this contract, the period of performance for the option shall be four (4) months from date of option exercise.
- \* Changed by Modification P00001.

\*\*\* END OF NARRATIVE F 001 \*\*\*

				Reference No. of Document Being Continued					Page 8 of 8		
CONTINUATION SHEET			PIIN/SIIN DAAE07-00-C-L026			MOD/AMD POO	MOD/AMD P00001				
Name of Offeror or Contractor: DYNASIM RESEARCH LTD											
SECTION	G - CONTRACT ADMINI	STRATION	DATA								
LINE	PRON/		OBLG STAT/				INCREASE/DECREASE		CUMULATIVE		
TEM_	AMS CD	<u>ACRN</u>	JOB ORD NO	_	PRIOR AMOUNT		AMOUNT		AMOUNT		
002AA	E112C162EH	AB	1	\$	0.00	\$	24,845.00	\$	24,845.00		
	665502M4055DD		12C162								
002AB	E112C162EH	AB	1	\$	0.00	\$	24,846.00	\$	24,846.00		
	665502M4055DD		12C162								
					NET CHANGE	\$	49,691.00				
SERVICE	NET CHANGE						ACCOUNTING		INCREASE/DECREASE		
NAME	BY ACRN	<u>ACCO</u>	UNTING CLAS	SIFICAT	ION		STATION		AMOUNT		
rmy	AB	21	1204000001	6D7675P	665502255Y S2011	3	W56HZV	\$	49,691.00		
							NET CHANGE	\$	49,691.00		

PRIOR AMOUNT

NET CHANGE FOR AWARD: \$

 PRIOR AMOUNT
 INCREASE/DECREASE
 CUMULATIVE

 OF AWARD
 AMOUNT
 OBLIG AMT

 69,631.00
 \$ 49,691.00
 \$ 119,322.00